

In the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

- 1 1. (Previously Amended) A server for a merchant computer system,
2 the server comprising:
 - 3 a file store configured to store a range of audio/video
4 products in respective product files and client history data;
 - 5 a dialogue unit operable to invite and receive a client
6 selection from among the products, and to define a degrade level
7 signal dependent upon a client integrity indicator determined from
8 a personal client file containing client history data stored in the
9 file store;
 - 10 a product reader connected to read the product files from the
11 file store to generate a digital audio/video signal; and
 - 12 a signal processing unit having an input selectively
13 connectable to receive the digital audio/video signal from the
14 product reader, a processing core operable to apply a defined level
15 of content degradation to the digital audio/video signal creating a
16 degraded digital audio/video signal having a degradation in
17 perceived quality corresponding to the defined degrade level signal
18 of the dialogue unit, and an output connected to output the
19 degraded digital audio/video signal.

Claims 2 to 4. (Canceled)

- 1 5. (Original) A server according to claim 1, wherein the
2 processing core comprises a digital signal processor.
- 1 6. (Original) A server according to claim 5, the digital signal
2 processor including a delay line structure having an input arranged
3 to receive a bit stream derived from the digital audio/video

4 signal, noise insertion circuitry for manipulating bits of the bit
5 stream to degrade signal quality, and an output arranged to output
6 the manipulated bit stream.

1 7. (Previously Amended) A server according to claim 5, the
2 digital signal processor including:

3 a discrete Fourier transform unit operable to apply a discrete
4 Fourier transform to obtain a frequency domain representation of
5 the digital audio/video signal;

6 a frequency modulator operable to apply a manipulation process
7 to the frequency domain representation of the digital audio/video
8 signal;

9 an inverse discrete Fourier transform unit operable to apply
10 an inverse discrete Fourier transform to reconstruct a time domain
11 representation of the digital audio/video signal;

12 wherein the manipulation process applied by the frequency
13 modulator is such as to effect a degradation of perceived signal
14 quality in the digital audio/video signal reconstructed by the
15 inverse digital Fourier transform unit.

8. (Canceled)

1 9. (Previously Amended) A server according to claim 7, wherein
2 the manipulation process includes one or more of the following:
3 frequency band rejections, frequency low pass and frequency high
4 pass to effect a degradation of perceived signal quality.

1 10. (Previously Amended) A server according to claim 7, wherein
2 the manipulation process includes phase inversion over at least one
3 range of frequency components.

1 11. (Original) A server according to claim 7, wherein the
2 manipulation process applied by the frequency modulator is applied
3 to digital audio signals and inserts masked sound contributions
4 adjacent amplitude peaks of the frequency domain representation of
5 the digital audio signal.

1 12. (Previously Amended) A server according to claim 7, further
2 including a mixer operatively arranged before the discrete Fourier
3 transform unit to effect a degradation of perceived signal quality.

1 13. (Previously Amended) A server according to claim 12, wherein a
2 frequency modulator is operatively arranged between the mixer and
3 the inverse discrete Fourier transform unit, and the manipulation
4 process includes band-pass filtering to suppress frequency
5 contributions lying outside a selected frequency range to effect a
6 degradation of perceived signal quality.

1 14. (Original) A server according to claim 13, wherein the
2 manipulation process inserts masked sound contributions adjacent
3 the mixing frequency.

1 15. (Original) A server according to claim 5, the digital signal
2 processor including:

3 a frame buffer for holding frames of a digital video signal;
4 and

5 a frame manipulator operatively arranged to manipulate frames
6 in the frame buffer to generate a degraded digital video signal.

1 16. (Previously Amended) A server according to claim 15, wherein
2 the digital signal processor is configured to process digital video
3 signals conforming to an MPEG standard including as frame types I-
4 frames, P-frames and B-frames, wherein the frame manipulator is

5 operable to identify the frame type of frames held in the frame
6 buffer, and operable to perform frame manipulation according to
7 frame type so as to effect a degradation of perceived video signal
8 quality.

1 17. (Previously Amended) A server according to claim 15, wherein
2 the digital signal processor is configured to process digital video
3 signals conforming to an MPEG standard including data blocks, each
4 comprising a plurality of pixels, wherein the frame manipulator is
5 operable to vary the pixels of the data blocks of at least selected
6 ones of the frames so as to effect a degradation of perceived video
7 signal quality.

1 18. (Previously Amended) A server according to claim 15, wherein
2 the digital signal processor is configured to process digital video
3 signals conforming to an MPEG standard including motion vectors,
4 wherein the frame manipulator is operable to vary the motion
5 vectors of at least selected ones of the frames so as to effect a
6 degradation of perceived video signal quality.

1 19. (Previously Amended) A server according to claim 15, wherein
2 the digital signal processor is configured to process digital video
3 signals conforming to an MPEG standard including objects, wherein
4 the frame manipulator is operable to manipulate the objects of at
5 least selected ones of the frames so as to effect a degradation of
6 perceived video signal quality.

1 20. (Previously Amended) A server according to claim 1, wherein
2 the processing core is operable to process a multi-channel digital
3 audio signal by switching individual channels within the multi-
4 channel signal to apply spatial modification to the digital audio

5 signal so as to effect a degradation of perceived digital audio
6 signal quality.

1 21. (Previously Amended) A server according to claim 1, wherein
2 the processing core is operable to process a multi-channel digital
3 audio signal by inverting the phase of at least one of the audio
4 channels so as to effect a degradation of perceived digital audio
5 signal quality.

1 22. (Previously Amended) A server according to claim 1, wherein
2 the processing core is operable to process a multi-channel digital
3 audio/video signal by adding together individual ones of the
4 channels so as to effect a degradation of perceived digital
5 audio/video signal quality.

1 23. (Previously Amended) A server according to claim 1, wherein
2 the processing core is operable to process a multi-channel digital
3 audio/video signal by removal or attenuation of at least one of the
4 channels so as to effect a degradation of perceived digital
5 audio/video signal quality.

1 24. (Previously Amended) A server according to claim 1, wherein
2 the digital audio/video signal comprises an n-bit digital audio
3 signal and the processing core is operable to convert the n-bit
4 digital audio signal into an m-bit digital audio signal where m is
5 less than n so as to effect a degradation of perceived digital
6 audio signal quality.

1 25. (Previously Amended) A server according to claim 1, wherein
2 the processing core is operable to time modulate the digital
3 audio/video signal so as to effect a degradation of perceived
4 digital audio signal quality.

1 26. (Original) A server according to claim 25, wherein the time
2 modulation is one or more of:

3 a speed-up or slow-down the digital audio/video signal;
4 a change in the value of data bits in volume, luminance or
5 chrominance data contained within the digital audio/video signal;
6 and

7 a lengthening of a sampling period of the digital audio/video
8 signal.

1 27. (Previously Amended) A server according to claim 1, wherein
2 the processing core comprises:

3 a first data converter arranged as an input stage to convert
4 the digital audio/video signal into an analog audio/video signal;
5 an analog processing unit operable to apply a defined level of
6 audio/video degradation to the analog signal creating a degraded
7 analog audio signal having a degradation in perceived quality
8 corresponding to said defined level of content degradation;

9 a second data converter arranged as an output stage to convert
10 the degraded analog signal into a degraded digital audio/video
11 signal for output.

1 28. (Previously Amended) A server according to claim 27, wherein
2 the analog processing unit is operable to apply frequency domain
3 modulation to an analog audio signal so as to effect a degradation
4 of perceived audio signal quality.

1 29. (Previously Amended) A server according to claim 28, wherein
2 the frequency domain modulation is one or more of: band-reject
3 filtering, low-pass filtering, high-pass filtering and frequency-
4 selective phase inversion to effect a degradation of perceived
5 signal quality.

1 30. (Previously Amended) A server according to claim 1, wherein
2 the processing core comprises a mixer for adding a secondary signal
3 to the digital audio/video signal so as to effect a degradation of
4 perceived digital audio/video signal quality.

1 31. (Original) A server according to claim 30, wherein the signal
2 processing unit further comprises a signal generator for generating
3 the secondary signal.

1 32. (Original) A server according to claim 31, wherein the signal
2 generator is operable as a noise generator.

1 33. (Original) A server according to claim 31, wherein the signal
2 generator is operable to generate a content-based audio signal.

1 34. (Previously Amended) A server according to claim 30, wherein
2 the dialogue unit is operable to generate a degrade level signal,
3 the signal processing unit having a degrade level signal input for
4 receiving a degrade level signal from the dialogue unit and wherein
5 the level of the secondary signal mixed with the digital
6 audio/video signal is determined by the degrade level signal.

1 35. (Previously Amended) A method of operating a server of a
2 merchant computer system, the method comprising:

3 inviting a client to make a selection from a range of
4 audio/video products stored by the server in product files;

5 receiving a client selection for evaluation of one of the
6 products;

7 reading the selected product file to generate a digital
8 audio/video signal;

9 defining a level of content degradation dependent on a client
10 integrity indicator determined from a personal client file
11 containing client history data;

12 applying the defined level of content degradation to the
13 digital audio/video signal to generate a degraded digital
14 audio/video signal having a degradation in perceived quality
15 corresponding to said defined level of content degradation; and

16 outputting the degraded digital audio/video signal to the
17 client.

Claim 36. (Canceled)

1 37. (Previously Amended) A method of operating a server of a
2 merchant computer system, the method comprising:

3 inviting a client to make a selection from a range of
4 audio/video products stored by the server in product files;

5 receiving a client selection for evaluation of one of the
6 products;

7 reading the selected product file to generate a digital
8 audio/video signal;

9 defining a level of content degradation dependent on an
10 authorization response received by the server from a remote payment
11 gateway computer system following an authorization request by the
12 server including a client i.d., a client payment instrument and a
13 monetary value of the product selected for evaluation by

14 the server transmitting to the client a request for
15 identification of type of payment authorization,

16 the client transmitting to the server identification of a
17 type of payment authorization,

18 defining at the server a level of content degradation as
19 a function of the identified type of payment authorization;

20 applying the defined level of content degradation to the
21 digital audio/video signal to generate a degraded digital
22 audio/video signal having a degradation in perceived quality
23 corresponding to said defined level of content degradation; and
24 outputting the degraded digital audio/video signal to the
25 client.

1 38. (Original) A method according to claim 35, utilizing a digital
2 signal processor to apply the defined level of content degradation
3 to the digital data stream.

1 39. (Previously Amended) A method of communicating between a
2 client, server and gateway on a computer network, the method
3 comprising:

4 a) the client establishing communication with the server to
5 identify the client and a client payment instrument to the server;

6 b) the server transmitting to the client a range of
7 audio/video products for supply in return for payment;

8 c) the client transmitting to the server an evaluation
9 request for one of the products;

10 d) the server and gateway communicating to obtain payment
11 authorization for the requested product from the payment
12 instrument;

13 e) the server defining a level of content degradation as a
14 function of client history;

15 f) the server transmitting to the client a degraded
16 evaluation version of the selected product without payment
17 authorization, the degraded evaluation version of the selected
18 product having a degraded perceived quality corresponding to the
19 level of content degradation;

20 g) the client transmitting to the server a payment decision;

21 h) the server and gateway communicating to effect payment
22 capture for the authorized payment; and
23 i) the server transmitting to the client a non-degraded
24 version of the selected product.

40. (Canceled)

1 41. (Previously Amended) A method of communicating between a
2 client, server and gateway on a computer network, the method
3 comprising:

4 a) the client establishing communication with the server to
5 identify the client and a client payment instrument to the server;
6 b) the server transmitting to the client a range of
7 audio/video products for supply in return for payment;
8 c) the client transmitting to the server an evaluation
9 request for one of the products;
10 d) the server and gateway communicating to obtain payment
11 authorization for the requested product from the payment
12 instrument;
13 e) the server defining a level of content degradation as a
14 function of said client payment instrument;
15 f) the server transmitting to the client a degraded
16 evaluation version of the selected product without payment
17 authorization, the degraded evaluation version of the selected
18 product having a degraded perceived quality corresponding to the
19 level of content degradation;
20 g) the client transmitting to the server a payment decision;
21 h) the server and gateway communicating to effect payment
22 capture for the authorized payment; and
23 i) the server transmitting to the client a non-degraded
24 version of the selected product.

1 42. (Previously Amended) A server apparatus comprising:
2 means for supplying a range of audio/video products as
3 respective digital audio/video signals;
4 means for inviting and receiving a client selection from among
5 the products via a network connection;
6 means for defining a level of content degradation as a
7 function of client history;
8 means for processing the digital audio/video signal associated
9 with the selected product to apply the defined level of content
10 degradation thereto; and
11 means for outputting the degraded digital audio/video signal
12 to the network connection, the degraded digital audio/video signal
13 having a degraded perceived quality corresponding to the defined
14 level of content degradation, whereby a degraded version of the
15 selected product is supplied to the client.

1 43. (Previously Amended) A merchant computer system comprising a
2 server and a client interconnectable over a network, wherein the
3 server comprises:
4 a file store configured to store a range of audio/video
5 products in respective product files;
6 a dialogue unit having a network connection and operable to
7 invite and receive a client selection from among the products via
8 the network connection, and to define a level of content
9 degradation dependent upon a client integrity indicator determined
10 from a personal client file containing client history data stored
11 in the file store;
12 a product reader connected to read the product files from the
13 file store to generate a digital audio/video signal; and
14 a signal processing unit having an input connectable to
15 receive the digital audio/video signal from the product reader, a
16 processing core operable to apply a defined level of content

17 degradation to the digital audio/video signal creating a degraded
18 digital audio/video signal having a degradation in perceived
19 quality corresponding to said defined level of content degradation
20 of the dialogue unit, and an output connected to output the
21 degraded digital audio/video signal from the processing core to the
22 network connection.

1 44 (Original) The system of claim 43, wherein the client
2 comprises an audio/video reproduction system operable to play the
3 audio/video product communicated by way of the digital audio/video
4 signal.

1 45. (Original) The system of claim 43, the server further
2 including an output stage operatively arranged between the output
3 of the signal processing unit and the network connection, the
4 output stage having a packetizer for sub-dividing the degraded
5 digital audio/video signal into encrypted data packets and
6 associating decryption keys with each encrypted data packet, the
7 dialogue unit being operable to supply a packet decoder to the
8 client over the network for decoding the digital video/audio
9 signal, and wherein the client includes an input stage connected to
10 receive the packet decoder and load the packet decoder into a
11 decoder host, the client input stage further comprising an input
12 connected to receive the data packets and supply the data packets
13 to the decoder host for packetwise decoding by applying the packet
14 decoder with the associated decryption key of the data packet
15 concerned, wherein the client input stage is configured to corrupt
16 the decryption key of any given data packet before the decoded data
17 of that packet is transmitted from the input stage in a form
18 playable by the reproduction system.

1 46. (Previously Amended) A method of communicating between a
2 client, server and gateway on a computer network, the method
3 comprising:

4 a) the client establishing communication with the server to
5 identify the client;

6 b) the server transmitting to the client a range of
7 audio/video products for supply in return for payment;

8 c) the client transmitting to the server an evaluation
9 request for one of the products;

10 d) the server transmitting to the client a degraded
11 evaluation version of the selected product without payment
12 authorization, the degraded evaluation version of the selected
13 product having a degraded perceived quality;

14 e) performing steps b) through d) at least once;

15 f) the client transmitting to the server a purchase decision
16 and payment instrument;

17 g) the server and gateway communicating to obtain payment
18 authorization for the requested product from the payment
19 instrument;

20 h) the server and gateway communicating to effect payment
21 capture for the authorized payment; and

22 i) the server transmitting to the client a non-degraded
23 version of the selected product.

Claims 47 and 48. (Canceled)